For the use of a Registered Medical Practitioner or a Hospital or a Laboratory only

VALZAAR-H

1. Generic Name

Valsartan and Hydrochlorothiazide Tablets I.P.

2. Qualitative and quantitative composition

VALZAAR-H 80

Each film coated tablet contains:

Valsartan I.P…….80 mg

Hydrochlorothiazide I.P. …..12.5 mg

Colours: Lake of Ponceau 4R and Titanium dioxide I.P.

VALZAAR-H 160

Each film coated tablet contains:

Valsartan I.P…….160 mg

Hydrochlorothiazide I.P. …..12.5 mg

Colours: Lake of Ponceau 4R and Titanium dioxide I.P.

The excipients are Microcrystalline cellulose, Sodium lauryl sulphate, Crosspovidone xl 10, Colloidal silicon dioxide, Magnesium stearate, Crosspovidone xl-10, Colloidal silicon dioxide, Magnesium stearate, Lake of ponceau, Isopropyl alcohol, Propylene glycol.

3. Dosage form and strength

Dosage Form: Film coated tablets

Strength: 80 mg/12.5 mg and 160 mg/12.5 mg

4. Clinical particulars

4.1 Therapeutic indication

VALZAAR-H is indicated for treatment of mild to moderate hypertension.

4.2 Posology and method of administration

WARNING: FETAL TOXICITY
When pregnancy is detected, discontinue product as soon as possible
Drugs that act directly on the renin-angiotensin system can cause injury and death to the developing fetus.

Posology

The recommended dose of Valzaar H 80/12.5mg is one film-coated tablet once daily. Dose titration with the individual components is recommended. In each case, up-titration of

individual components to the next dose should be followed in order to reduce the risk of hypotension and other adverse events.

When clinically appropriate direct change from monotherapy to the fixed combination may be considered in patients whose blood pressure is not adequately controlled on valsartan or hydrochlorothiazide monotherapy, provided the recommended dose titration sequence for the individual components is followed.

The clinical response to Valzaar H should be evaluated after initiating therapy and if blood pressure remains uncontrolled, the dose may be increased by increasing either one of the components to a maximum dose of Valzaar H 320 mg/25 mg.

The antihypertensive effect is substantially present within 2 weeks.

In most patients, maximal effects are observed within 4 weeks. However, in some patients, 4-8 weeks treatment may be required. This should be taken into account during dose titration.

Method of administration

Valzaar H can be taken with or without food and should be administered with water.

Special populations

Patients with renal impairment

No dose adjustment is required for patients with mild to moderate renal impairment (Glomerular Filtration Rate (GFR) ≥ 30 ml/min). Due to the hydrochlorothiazide component, Valzaar H is contraindicated in patients with severe renal impairment (GFR < 30 mL/min) and anuria.

Patients with hepatic impairment

In patients with mild to moderate hepatic impairment without cholestasis the dose of valsartan should not exceed 80 mg. No adjustment of the hydrochlorothiazide dose is required for patients with mild to moderate hepatic impairment. Due to the valsartan component, Valzaar H is contraindicated in patients with severe hepatic impairment or with biliary cirrhosis and cholestasis.

Older people

No dose adjustment is required in elderly patients.

Paediatric patients

Valzaar H is not recommended for use in children below the age of 18 years due to a lack of data on safety and efficacy.

4.3 Contraindications

- Hypersensitivity to active substances, other sulfonamide-derived medicinal products or to any of the excipients.
- Second and third trimester of pregnancy.
- Severe hepatic impairment, biliary cirrhosis and cholestasis.
- Severe renal impairment (creatinine clearance < 30 ml/min), anuria.
- Refractory hypokalaemia, hyponatraemia, hypercalcaemia, and symptomatic hyperuricemia.

- Concomitant use of Valzaar H with Aliskiren containing products in patients with diabetes mellitus or renal impairment (GFR < 60 mL/min/1.73m^2).

4.4 Special warnings and precautions for use

Serum electrolyte changes

Valsartan

Concomitant use with potassium supplements, potassium-sparing diuretics, salt substitutes containing potassium, or other agents that may increase potassium levels (heparin, etc.) is not recommended. Monitoring of potassium should be undertaken as appropriate.

Hydrochlorothiazide

Hypokalaemia has been reported under treatment with thiazide diuretics, including hydrochlorothiazide. Frequent monitoring of serum potassium is recommended.

Treatment with thiazide diuretics, including hydrochlorothiazide, has been associated with hyponatraemia and hypochloraemic alkalosis. Thiazides, including hydrochlorothiazide, increase the urinary excretion of magnesium, which may result in hypomagnesaemia. Calcium excretion is decreased by thiazide diuretics. This may result in hypercalcaemia.

As for any patient receiving diuretic therapy, periodic determination of serum electrolytes should be performed at appropriate intervals.

Sodium and/or volume-depleted patients

Patients receiving thiazide diuretics, including hydrochlorothiazide, should be observed for clinical signs of fluid or electrolyte imbalance.

In severely sodium-depleted and/or volume-depleted patients, such as those receiving high doses of diuretics, symptomatic hypotension may occur in rare cases after initiation of therapy with Valsartan/Hydrochlorothiazide. Sodium and/or volume depletion should be corrected before starting treatment with Valsartan/Hydrochlorothiazide.

Patients with severe chronic heart failure or other conditions with stimulation of the renin-angiotensin-aldosterone-system

In patients whose renal function may depend on the activity of the renin-angiotensin-aldosterone system (e.g. patients with severe congestive heart failure), treatment with angiotensin converting enzyme inhibitors has been associated with oliguria and/or progressive azotaemia, and in rare cases with acute renal failure and/or death. Evaluation of patients with heart failure or post-myocardial infarction should always include assessment of renal function. The use of Valzaar H in patients with severe chronic heart failure has not been established.

Hence it cannot be excluded that because of the inhibition of the renin-angiotensin-aldosterone system the application of Valsartan/Hydrochlorothiazide as well may be associated with impairment of the renal function. Valsartan/Hydrochlorothiazide should not be used in these patients.

Renal artery stenosis

Valsartan/Hydrochlorothiazide should not be used to treat hypertension in patients with unilateral or bilateral renal artery stenosis or stenosis of the artery to a solitary kidney, since blood urea and serum creatinine may increase in such patients.

Primary hyperaldosteronism

Patients with primary hyperaldosteronism should not be treated with Valsartan/Hydrochlorothiazide as their renin-angiotensin system is not activated.

Aortic and mitral valve stenosis, hypertrophic obstructive cardiomyopathy

As with all other vasodilators, special caution is indicated in patients suffering from aortic or mitral stenosis, or hypertrophic obstructive cardiomyopathy (HOCM).

Renal impairment

No dosage adjustment is required for patients with renal impairment with a creatinine clearance ≥30 ml/min. Periodic monitoring of serum potassium, creatinine and uric acid levels is recommended when Valsartan/Hydrochlorothiazide is used in patients with renal impairment.

Kidney transplantation

There is currently no experience on the safe use of Valsartan/Hydrochlorothiazide in patients who have recently undergone kidney transplantation.

Hepatic impairment

In patients with mild to moderate hepatic impairment without cholestasis, Valsartan/Hydrochlorothiazide should be used with caution. Thiazides should be used with caution in patients with impaired hepatic function or progressive liver disease, since minor alterations of fluid and electrolyte balance may precipitate hepatic coma.

History of angioedema

Angioedema, including swelling of the larynx and glottis, causing airway obstruction and/or swelling of the face, lips, pharynx, and/or tongue has been reported in patients treated with valsartan; some of these patients previously experienced angioedema with other drugs including ACE inhibitors. Valsartan/Hydrochlorothiazide should be immediately discontinued in patients who develop angioedema, and Valsartan/Hydrochlorothiazide should not be re-administered.

Systemic lupus erythematosus

Thiazide diuretics, including hydrochlorothiazide, have been reported to exacerbate or activate systemic lupus erythematosus.

Other metabolic disturbances

Thiazide diuretics, including hydrochlorothiazide, may alter glucose tolerance and raise serum levels of cholesterol, triglycerides and uric acid. In diabetic patients dosage adjustments of insulin or oral hypoglycaemic agents may be required.

Thiazides may reduce urinary calcium excretion and cause an intermittent and slight elevation of serum calcium in the absence of known disorders of calcium metabolism. Marked hypercalcaemia may be evidence of underlying hyperparathyroidism. Thiazides should be discontinued before carrying out tests for parathyroid function.

Photosensitivity

Cases of photosensitivity reactions have been reported with thiazide diuretics.If photosensitivity reaction occurs during treatment, it is recommended to stop the treatment. If

a re-administration of the diuretic is deemed necessary, it is recommended to protect exposed areas to the sun or to artificial UVA.

Pregnancy

Angiotensin II Receptor Antagonists (AIIRAs) should not be initiated during pregnancy. Unless continued AIIRAs therapy is considered essential, patients planning pregnancy should be changed to alternative anti-hypertensive treatments which have an established safety profile for use in pregnancy. When pregnancy is diagnosed, treatment with AIIRAs should be stopped immediately, and, if appropriate, alternative therapy should be started.

General

Caution should be exercised in patients who have shown prior hypersensitivity to other angiotensin II receptor antagonists. Hypersensitivity reactions to hydrochlorothiazide are more likely in patients with allergy and asthma.

Choroidal effusion, acute myopia and secondary acute Angle-Closure Glaucoma

Hydrochlorothiazide, a sulfonamide, has been associated with an idiosyncratic reaction resulting in choroidal effusion with visual field defect, acute transient myopia and acute angle-closure glaucoma. Symptoms include acute onset of decreased visual acuity or ocular pain and typically occur within hours to week of a drug initiation. Untreated acute-angle closure glaucoma can lead to permanent vision loss.

The primary treatment is to discontinue hydrochlorothiazide as rapidly as possible. Prompt medical or surgical treatment may need to be considered if the intraocular pressure remains uncontrolled. Risk factors for developing acute angle closure glaucoma may include a history of sulfonamide or penicillin allergy.

Dual Blockade of the Renin-Angiotensin-Aldosterone System (RAAS)

There is evidence that the concomitant use of ACE inhibitors, angiotensin II receptor blockers or aliskiren increases the risk of hypotension, hyperkalaemia, and decreased renal function (including acute renal failure). Dual blockade of the RAAS through the combined use of ACE inhibitors, angiotensin II receptor blockers or aliskiren is therefore not recommended.

If dual blockade therapy is considered absolutely necessary, this should only occur under specialist supervision and subject to frequent close monitoring of renal function, electrolytes and blood pressure. ACE inhibitors and angiotensin II receptor blockers should not be used concomitantly in patients with diabetic nephropathy.

Non-melanoma skin cancer

An increased risk of non-melanoma skin cancer (NMSC) [basal cell carcinoma (BCC) and squamous cell carcinoma (SCC)] with increasing cumulative dose of hydrochlorothiazide exposure has been observed in two epidemiological studies based on the Danish National Cancer Registry. Photosensitising actions of hydrochlorothiazide could act as a possible mechanism for NMSC.

Patients taking hydrochlorothiazide should be informed of the risk of NMSC and advised to regularly check their skin for any new lesions and promptly report any suspicious skin lesions. Possible preventive measures such as limited exposure to sunlight and UV rays and, in case of exposure, adequate protection should be advised to the patients in order to minimize the risk of skin cancer. Suspicious skin lesions should be promptly examined potentially including

histological examinations of biopsies. The use of hydrochlorothiazide may also need to be reconsidered in patients who have experienced previous NMSC.

4.5 Drugs interactions

Interactions related to both valsartan and hydrochlorothiazide

Concomitant use not recommended

Lithium

Reversible increases in serum lithium concentrations and toxicity have been reported during concomitant administration of lithium with ACE inhibitors, angiotensin II receptor antagonist or thiazides, including hydrochlorothiazide. Since renal clearance of lithium is reduced by thiazides, the risk of lithium toxicity may presumably be increased further with Valzaar H. If the combination proves necessary, a careful monitoring of serum lithium levels is recommended.

Concomitant use requiring caution

Other antihypertensive agents

Valzaar H may increase the effects of other agents with antihypertensive properties (e.g. guanethidine, methyldopa, vasodilators, ACEI, ARBs, beta-blockers, calcium channel blockers and DRIs).

Pressor amines (e.g. noradrenaline, adrenaline)

Possible decreased response to pressor amines. The clinical significance of this effect is uncertain and not sufficient to preclude their use.

Non-steroidal anti-inflammatory medicines (NSAIDs), including selective COX-2 inhibitors, acetylsalicylic acid (>3 g/day), and non-selective NSAIDs.

NSAIDS can attenuate the antihypertensive effect of both angiotensin II antagonists and hydrochlorothiazide when administered simultaneously. Furthermore, concomitant use of Valzaar H and NSAIDs may lead to worsening of renal function and an increase in serum potassium. Therefore, monitoring of renal function at the beginning of the treatment is recommended, as well as adequate hydration of the patient.

Interactions related to valsartan

Dual blockade of the Renin-Angiotensin-Aldosterone System (RAAS) with ARBs, ACEIs, or aliskiren

Clinical trial data has shown that dual blockade of the renin-angiotensin-aldosterone-system (RAAS) through the combined use of ACE inhibitors, angiotensin II receptor blockers or aliskiren is associated with a higher frequency of adverse events such as hypotension, hyperkalaemia and decreased renal function (including acute renal failure) compared to the use of s single RAAS-acting agent.

Concomitant use not recommended

Potassium-sparing diuretics, potassium supplements, salt substitutes containing potassium and other substances that may increase potassium levels.

If a medicinal product that affects potassium levels is considered necessary in combination with valsartan, monitoring of potassium plasma levels is advised.

Transporters

In vitro data indicates that valsartan is a substrate of the hepatic uptake transporter OATP1B1/OATP1B3 and the hepatic efflux transporter MRP2. The clinical relevance of this finding is unknown. Co-administration of inhibitors of the uptake transporter (eg. rifampin, ciclosporin) or efflux transporter (eg. ritonavir) may increase the systemic exposure to valsartan. Exercise appropriate care when initiating or ending concomitant treatment with such drugs.

No interaction

In drug interaction studies with valsartan, no interactions of clinical significance have been found with valsartan or any of the following substances: cimetidine, warfarin, furosemide, digoxin, atenolol, indomethacin, hydrochlorothiazide, amlodipine, glibenclamide. Digoxin and indomethacin could interact with the hydrochlorothiazide component of Valzaar H (see interactions related to hydrochlorothiazide).

Interactions related to hydrochlorothiazide

Concomitant use requiring caution

Medicinal products affecting serum potassium level

The hypokalaemic effect of hydrochlorothiazide may be increased by concomitant administration of kaliuretic diuretics, corticosteroids, laxatives, ACTH, amphotericin, carbenoxolone, penicillin G, salicylic acid and derivatives.

If these medicinal products are to be prescribed with the hydrochlorothiazide-valsartan combination, monitoring of potassium plasma levels is advised (see section 4.4).

Medicinal products that could induce torsades de pointes

Due to the risk of hypokalaemia, hydrochlorothiazide should be administered with caution when associated with medicinal products that could induce torsades de pointes, in particular Class Ia and Class III antiarrhythmics and some antipsychotics.

Medicinal products affecting serum sodium level

The hyponatraemia effect of diuretics may be intensified by concomitant administration of drugs such as antidepressants, antipsychotics, antiepileptics, etc. Caution is advised in long-term administration of these drugs.

Digitalis glycosides

Thiazide-induced hypokalaemia or hypomagnesaemia may occur as undesirable effects favouring the onset of digitalis-induced cardiac arrhythmias (see section 4.4).

Calcium salts and vitamin D

Administration of thiazide diuretics, including hydrochlorothiazide, with vitamin D or with calcium salts may potentiate the rise in serum calcium. Concomitant use of thiazide type diuretics with calcium salts may cause hypercalcaemia in patients pre-disposed for hypercalcaemia (e.g. hyperparathyroidism, malignancy or vitamin-D-mediated conditions) by increasing tubular calcium reabsorption.

Antidiabetic agents (oral agents and insulin)

Thiazides may alter glucose tolerance. Dose adjustment of the antidiabetic medicinal product may be necessary.

Metformin should be used with caution because of the risk of lactic acidosis induced by possible functional renal failure linked to hydrochlorothiazide.

Beta blockers and diazoxide

Concomitant use of thiazide diuretics, including hydrochlorothiazide, with beta blockers may increase the risk of hyperglycaemia. Thiazide diuretics, including hydrochlorothiazide, may enhance the hyperglycaemic effect of diazoxide.

Medicinal products used in the treatment of gout (probenecid, sulfinpyrazone and allopurinol)

Dose adjustment of uricosuric medications may be necessary as hydrochlorothiazide may raise the level of serum uric acid. Increase of dosage of probenecid or sulfinpyrazone may be necessary. Co-administration of thiazide diuretics, including hydrochlorothiazide, may increase the incidence of hypersensitivity reactions to allopurinol.

Anticholinergic agents and other medicinal products affecting gastric motility

The bioavailability of thiazide-type diuretics may be increased by anticholinergic agents (e.g. atropine, biperiden), apparently due to a decrease in gastrointestinal motility and the stomach emptying rate. Conversely, it is anticipated that prokinetic drugs such as cisapride may decrease the bioavailability of thiazide-type diuretics.

Amantadine

Thiazides, including hydrochlorothiazide, may increase the risk of adverse effects caused by amantadine.

Ion exchange resins

Absorption of thiazide diuretics, including hydrochlorothiazide, is decreased by cholestyramine or colestipol. This could result in sub-therapeutic effects of thiazide diuretics. However, staggering the dosage of hydrochlorothiazide and resin such that hydrochlorothiazide is administered at least 4 h before or 4-6 h after the administration of resins would potentially minimise the interaction.

Cytotoxic agents

Thiazides, including hydrochlorothiazide, may reduce renal excretion of cytotoxic agents (e.g. cyclophosamide, methotrexate) and potentiate their myelosuppressive effects.

Non-depolarising skeletal muscle relaxants (e.g. tubocurarine)

Thiazides, including hydrochlorothiazide, potentiate the action of skeletal muscle relaxants such as curare derivatives.

Ciclosporin

Concomitant treatment with ciclosporin may increase the risk of hyperuricaemia and gout-type complications.

Alcohol, barbiturates or narcotics

Concomitant administration of thiazide diuretics with substances that also have a blood pressure lowering effect (e.g. by reducing sympathetic central nervous system activity or direct vasodilatation activity) may potentiate orthostatic hypotension.

Methyldopa

There have been isolated reports of haemolytic anaemia in patients receiving concomitant treatment with methyldopa and hydrochlorothiazide.

Iodine contrast media

In case of diuretic-induced dehydration, there is an increased risk of acute renal failure, especially with high doses of the iodine product. Patients should be rehydrated before the administration.

4.6 Use in special populations (such as pregnant women, lactating women, paediatric patients, geriatric patients etc.)

Pregnancy

Valsartan

The use of Angiotensin II Receptor Antagonists (AIIRAs) is not recommended during first trimester of pregnancy. The use of AIIRAs is contra-indicated during the second and third trimester of pregnancy.

Epidemiological evidence regarding the risk of teratogenicity following exposure to ACE inhibitors during the first trimester of pregnancy has not been conclusive; however a small increase in risk cannot be excluded. Whilst there is no controlled epidemiological data on the risk with Angiotensin II Receptor Inhibitors (AIIRAs), similar risks may exist for this class of drugs. Unless continued AIIRAs therapy is considered essential, patients planning pregnancy should be changed to alternative anti-hypertensive treatments which have an established safety profile for use in pregnancy. When pregnancy is diagnosed, treatment with AIIRAs should be stopped immediately and, if appropriate, alternative therapy should be started.

AIIRAs therapy exposure during the second and third trimesters is known to induce human fetotoxicity (decreased renal function, oligohydramnios, skull ossification retardation) and neonatal toxicity (renal failure, hypotension, hyperkalaemia).

Should exposure to AIIRAs have occurred from the second trimester of pregnancy, ultrasound check of renal function and skull is recommended

Infants whose mothers have taken AIIRAs should be closely observed for hypotension.

Hydrochlorothiazide

There is limited experience with hydrochlorothiazide during pregnancy, especially during the first trimester. Animal studies are insufficient. Hydrochlorothiazide crosses the placenta. Based on the pharmacological mechanism of action of hydrochlorothiazide its use during the second and third trimester may compromise foeto-placental perfusion and may cause foetal and neonatal effects like icterus, disturbance of electrolyte balance and thrombocytopenia.

Breast-feeding

No information is available regarding the use of valsartan during breastfeeding. Hydrochlorothiazide is excreted in human milk.. Therefore the use of Valsartan/Hydrochlorothiazide during breast feeding is not recommended. Alternative treatments with better established safety profiles during breast-feeding are preferable, especially while nursing a newborn or preterm infant.

4.7 Effects on ability to drive and use machines

No studies on the effect of Valsartan/Hydrochlorothiazide, on the ability to drive and use machines have been performed. When driving vehicles or operating machines it should be taken into account that occasionally dizziness or weariness may occur.

4.8 Undesirable effects

Adverse drug reactions reported in clinical trials and laboratory findings occurring more frequently with valsartan plus hydrochlorothiazide versus placebo and individual postmarketing reports are presented below according to system organ class. Adverse drug reactions known to occur with each component given individually but which have not been seen in clinical trials may occur during treatment with valsartan/ hydrochlorothiazide.

Adverse Drug Reactions

Adverse drug reactions are ranked by frequency, the most frequent first, using the following convention: very common (≥ 1/10); common (≥ 1/100 to < 1/10); uncommon (≥ 1/1,000 to < 1/100); rare (≥ 1/10,000 to < 1/1,000); very rare (< 1/10,000); not known (frequency cannot be estimated from the available data).

Within each frequency grouping, adverse drug reactions are ranked in order of decreasing seriousness.

Table 1. Frequency of adverse reactions with valsartan/hydrochlorothiazide

Frequency	**Adverse Reactions**
Metabolism and nutrition disorders	
Uncommon	Dehydration
Nervous system disorders	
Very rare	Dizziness
Uncommon	Paraesthesia
Not known	Syncope
Eye disorders	
Uncommon	Vision blurred

Frequency	**Adverse Reactions**
Ear and labyrinth disorders	
Uncommon	Tinnitus
Vascular disorders	
Uncommon	Hypotension
Respiratory, thoracic and mediastinal disorders	
Uncommon	Cough
Not known	Non cardiogenic pulmonary oedema
Gastrointestinal disorders	
Very rare	Diarrhoea
Musculoskeletal and connective tissue disorders	
Uncommon	Myalgia
Very rare	Arthralgia
Renal and urinary disorders	
Not known	Impaired renal function
General disorders and administration site conditions	
Uncommon	Fatigue
Investigations	
Not known	Serum uric acid increased, Serum bilirubin and Serum creatinine increased, Hypokalaemia, Hyponatraemia, Elevation of Blood Urea Nitrogen, Neutropenia

Additional information on the individual components

Adverse reactions previously reported with one of the individual components may be potential undesirable effects with Valsartan/Hydrochlorothiazide as well, even if not observed in clinical trials or during post-marketing period.

Table 2. Frequency of adverse reactions with valsartan

Frequency	**Adverse Reactions**
Blood and lymphatic system disorders	
Not known	Decrease in haemoglobin, decrease in haematocrit, thrombocytopenia
Immune system disorders	
Not known	Other hypersensitivity/allergic reactions including serum sickness
Metabolism and nutrition disorders	
Not known	Increase of serum potassium, hyponatraemia
Ear and labyrinth disorders	
Uncommon	Vertigo
Vascular disorders	
Not known	Vasculitis
Gastrointestinal disorders	
Uncommon	Abdominal pain
Hepatobiliary disorders	
Not known	Elevation of liver function values
Skin and subcutaneous tissue disorders	
Not known	Angioedema, dermatitis bullous, rash, pruritus
Renal and urinary disorders	
Not known	Renal Failure

Table 3. Frequency of adverse reactions with hydrochorothiazide

Hydrochlorothiazide has been extensively prescribed for many years, frequently in higher doses than those administered with Valsartan/Hydrochlorothiazide. The following adverse reactions have been reported in patients treated with monotherapy of thiazide diuretics, including hydrochlorothiazide:

Frequency	**Adverse Reactions**
Neoplasms benign, malignant and unspecified (incl. cysts and polyps)	
Not known	Non-melanoma skin cancer (Basal cell carcinoma and Squamous cell carcinoma)
Blood and lymphatic system disorders	
Rare	Thrombocytopenia sometimes with purpura
Very rare	Agranulocytosis, leucopenia, haemolytic anaemia, bone marrow failure
Not known	Aplastic anemia
Immune system disorders	
Very rare	Hypersensitivity reactions
Metabolism and nutrition disorders	
Very common	Hypokalaemia, blood lipids increased (mainly at higher doses)
Common	Hyponatraemia, hypomagnesaemia, hyperuricaemia
Rare	Hypercalcaemia, hyperglycaemia, glycosuria and worsening of diabetic metabolic state
Very rare	Hypochloraemic alkalosis
Psychiatric disorders	
Rare	Depression, sleep disturbances
Nervous system disorders	
Rare	Headache, dizziness, paraesthesia
Eye disorders	
Rare	Visual impairment
Not known	Choroidal effusion, acute angle-closure glaucoma
Cardiac disorders	
Rare	Cardiac arrhythmias

Frequency	**Adverse Reactions**
Vascular disorders	
Common	Postural hypotension
Respiratory, thoracic and mediastinal disorders	
Very rare	Respiratory distress including pneumonitis and pulmonary oedema
Gastrointestinal disorders	
Common	Loss of appetite, mild nausea and vomiting
Rare	Constipation, gastrointestinal discomfort, diarrhoea
Very rare	Pancreatitis
Hepatobiliary disorders	
Rare	Intrahepatic cholestasis or jaundice
Renal and urinary disorders	
Not known	Renal dysfunction, acute renal failure
Skin and subcutaneous tissue disorders	
Common	Urticaria and other forms of rash
Rare	Photosensitisation
Very rare	Necrotising vasculitis and toxic epidermal necrolysis, cutaneous lupus erythematosus-like reactions, reactivation of cutaneous lupus erythematosus
Not known	Erythema multiforme
General disorders and administration site conditions	
Not known	Pyrexia, asthenia
Musculoskeletal and connective tissue disorders	
Not known	Muscle spasm
Reproductive system and breast disorders	
Common	Impotence

Description of selected adverse reactions

Non-melanoma skin cancer: based on available data from epidemiological studies, cumulative dose dependent association between hydrochlorothiazide and NMSC has been observed.

Reporting of side effects

If you get any side effects, talk to your doctor, pharmacist or nurse. This includes any possible side effects not listed in this leaflet. You can also report side effects directly via any point of contact of Torrent Pharma available at: http://www.torrentpharma.com/index.php/site/info/adverse_event_reporting.

4.9 Overdose

Symptoms

Overdose with valsartan may result in marked hypotension, which could lead to depressed level of consciousness, circulatory collapse and/or shock. In addition, the following signs and symptoms may occur due to an overdose of the hydrochlorothiazide component: nausea, somnolence, hypovolaemia, and electrolyte disturbances associated with cardiac arrhythmias and muscle spasms.

Treatment

The therapeutic measures depend on the time of ingestion and the type and severity of the symptoms, stabilisation of the circulatory condition being of prime importance.

If hypotension occurs, the patient should be placed in the supine position and salt and volume supplementation should be given rapidly.

Valsartan cannot be eliminated by means of haemodialysis because of its strong plasma binding behaviour whereas clearance of hydrochlorothiazide will be achieved by dialysis.

5. Pharmacological properties

5.1 Mechanism of Action

Valsartan:

Valsartan belongs to a class of medicines known as "angiotensin II receptor antagonists", which help to control high blood pressure. Angiotensin II is a substance in the body that causes vessels to tighten, thus causing your blood pressure to increase. Valsartan works by blocking the effect of angiotensin II. As a result, blood vessels relax and blood pressure is lowered.

Hydrochlorothiazide:

Hydrochlorothiazide belongs to a group of medicines called thiazide diuretics (also known as "water tablets"). Hydrochlorothiazide increases urine output, which also lowers blood pressure.

5.2 Pharmacodynamic properties

Pharmacotherapeutic group: Angiotensin II antagonists and diuretics, valsartan and diuretics; ATC code: C09D A03

Valsartan/hydrochlorothiazide

Valzaar H 80/12.5 mg Tablets only:

According to reported data, a double-blind, randomised, active-controlled trial in patients not adequately controlled on hydrochlorothiazide 12.5 mg, significantly greater mean systolic/diastolic BP reductions were observed with the combination of valsartan/hydrochlorothiazide 80/12.5 mg (14.9/11.3 mmHg) compared to hydrochlorothiazide 12.5 mg (5.2/2.9 mmHg) and hydrochlorothiazide 25 mg (6.8/5.7 mmHg). In addition, a significantly greater percentage of patients responded (diastolic BP <90 mmHg or reduction ≥10 mmHg) with valsartan/hydrochlorothiazide 80/12.5 mg (60%) compared to hydrochlorothiazide 12.5 mg (25%) and hydrochlorothiazide 25 mg (27%).

In a reported study, double-blind, randomised, active-controlled trial in patients not adequately controlled on valsartan 80 mg, significantly greater mean systolic/diastolic BP reductions were observed with the combination of valsartan/hydrochlorothiazide 80/12.5 mg (9.8/8.2 mmHg) compared to valsartan 80 mg (3.9/5.1 mmHg) and valsartan 160 mg (6.5/6.2 mmHg). In addition, a significantly greater percentage of patients responded (diastolic BP <90 mmHg or reduction ≥10 mmHg) with valsartan/hydrochlorothiazide 80/12.5 mg (51%) compared to valsartan 80 mg (36%) and valsartan 160 mg (37%).

In a reported study, double-blind, randomised, placebo-controlled, factorial design trial comparing various dose combinations of valsartan/hydrochlorothiazide to their respective components, significantly greater mean systolic/diastolic BP reductions were observed with the combination of valsartan/hydrochlorothiazide 80/12.5 mg (16.5/11.8 mmHg) compared to placebo (1.9/4.1 mmHg) and both hydrochlorothiazide 12.5 mg (7.3/7.2 mmHg) and valsartan 80 mg (8.8/8.6 mmHg). In addition, a significantly greater percentage of patients responded (diastolic BP <90 mmHg or reduction ≥10 mmHg) with valsartan/hydrochlorothiazide 80/12.5 mg (64%) compared to placebo (29%) and hydrochlorothiazide (41%).

Valzaar H 160/12.5 mg and 160/25mg Tablets only:

In a reported study, a double-blind, randomised, active-controlled trial in patients not adequately controlled on hydrochlorothiazide 12.5 mg, significantly greater mean systolic/diastolic BP reductions were observed with the combination of valsartan/ hydrochlorothiazide 160/12.5 mg (12.4/7.5 mmHg) compared to hydrochlorothiazide 25 mg (5.6/2.1 mmHg). In addition, a significantly greater percentage of patients responded (BP <140/90 mmHg or SBP reduction ≥20 mmHg or DBP reduction ≥10 mmHg) with valsartan/hydrochlorothiazide 160/12.5 mg (50%) compared to hydrochlorothiazide 25 mg (25%).

In a reported study, a double-blind, randomised, active-controlled trial in patients not adequately controlled on valsartan 160 mg, significantly greater mean systolic/diastolic BP reductions were observed with both the combination of valsartan/hydrochlorothiazide 160/25 mg (14.6/11.9 mmHg) and valsartan/hydrochlorothiazide 160/12.5 mg (12.4/10.4 mmHg) compared to valsartan 160 mg (8.7/8.8 mmHg). The difference in BP reductions between the 160/25 mg and 160/12.5 mg doses also reached statistical significance. In addition, a significantly greater percentage of patients responded (diastolic BP <90 mmHg or reduction ≥10 mmHg) with valsartan/hydrochlorothiazide 160/25 mg (68%) and 160/12.5 mg (62%) compared to valsartan 160 mg (49%).

In a double-blind, randomised, placebo-controlled, factorial design trial comparing various dose combinations of valsartan/hydrochlorothiazide to their respective components, significantly greater mean systolic/diastolic BP reductions were observed with the combination of valsartan/hydrochlorothiazide 160/12.5 mg (17.8/13.5 mmHg) and 160/25 mg (22.5/15.3

mmHg) compared to placebo (1.9/4.1 mmHg) and the respective monotherapies, i.e., hydrochlorothiazide 12.5 mg (7.3/7.2 mmHg), hydrochlorothiazide 25 mg (12.7/9.3 mmHg) and valsartan 160 mg (12.1/9.4 mmHg). In addition, a significantly greater percentage of patients responded (diastolic BP <90 mmHg or reduction ≥10 mmHg) with valsartan/hydrochlorothiazide 160/25 mg (81%) and valsartan/hydrochlorothiazide 160/12.5 mg (76%) compared to placebo (29%) and the respective monotherapies, i.e., hydrochlorothiazide 12.5 mg (41%), hydrochlorothiazide 25 mg (54%), and valsartan 160 mg (59%).

Valzaar H 80/12.5mg, 160/12.5 mg and 160/25mg Tablets:

Dose-dependent decreases in serum potassium occurred in controlled clinical studies with valsartan + hydrochlorothiazide. Reduction in serum potassium occurred more frequently in patients given 25 mg hydrochlorothiazide than in those given 12.5 mg hydrochlorothiazide. In controlled clinical trials with valsartan/hydrochlorothiazide the potassium lowering effect of hydrochlorothiazide was attenuated by the potassium-sparing effect of valsartan.

Beneficial effects of valsartan in combination with hydrochlorothiazide on cardiovascular mortality and morbidity are currently unknown.

Epidemiological studies have shown that long-term treatment with hydrochlorothiazide reduces the risk of cardiovascular mortality and morbidity.

Valsartan

Valsartan is an orally active and specific angiotensin II (Ang II) receptor antagonist. It acts selectively on the AT1 receptor subtype, which is responsible for the known actions of angiotensin II. The increased plasma levels of Ang II following AT1 receptor blockade with valsartan may stimulate the unblocked AT2 receptor, which appears to counterbalance the effect of the AT1 receptor. Valsartan does not exhibit any partial agonist activity at the AT1 receptor and has much (about 20,000 fold) greater affinity for the AT1 receptor than for the AT2 receptor. Valsartan is not known to bind to or block other hormone receptors or ion channels known to be important in cardiovascular regulation.

Valsartan does not inhibit ACE, also known as kininase II, which converts Ang I to Ang II and degrades bradykinin. Since there is no effect on ACE and no potentiation of bradykinin or substance P, angiotensin II antagonists are unlikely to be associated with coughing. In clinical trials where valsartan was compared with an ACE inhibitor, the incidence of dry cough was significantly ($P < 0.05$) lower in patients treated with valsartan than in those treated with an ACE inhibitor (2.6% versus 7.9% respectively). In a clinical trial of patients with a history of dry cough during ACE inhibitor therapy, 19.5% of trial subjects receiving valsartan and 19.0% of those receiving a thiazide diuretic experienced cough compared to 68.5% of those treated with an ACE inhibitor ($P < 0.05$).

Administration of valsartan to patients with hypertension results in reduction of blood pressure without affecting pulse rate. In most patients, after administration of a single oral dose, onset of antihypertensive activity occurs within 2 hours, and the peak reduction of blood pressure is achieved within 4-6 hours. The antihypertensive effect persists over 24 hours after dosing. During repeated dosing, the maximum reduction in blood pressure with any dose is generally attained within 2-4 weeks and is sustained during long-term therapy. Combined with hydrochlorothiazide, a significant additional reduction in blood pressure is achieved.

Abrupt withdrawal of valsartan has not been associated with rebound hypertension or other adverse clinical events.

In a reported data, in hypertensive patients with type 2 diabetes and microalbuminuria, valsartan has been shown to reduce the urinary excretion of albumin. The reported MARVAL (Micro Albuminuria Reduction with Valsartan) study assessed the reduction in urinary albumin excretion (UAE) with valsartan (80-160 mg/od) versus amlodipine (5-10 mg/od), in 332 type 2 diabetic patients (mean age: 58 years; 265 men) with microalbuminuria (valsartan: 58 µg/min; amlodipine: 55.4 µg/min), normal or high blood pressure and with preserved renal function (blood creatinine <120 µmol/l). At 24 weeks, UAE was reduced ($p < 0.001$) by 42% (–24.2 µg/min; 95% CI: –40.4 to –19.1) with valsartan and approximately 3% (–1.7 µg/min; 95% CI: –5.6 to 14.9) with amlodipine despite similar rates of blood pressure reduction in both groups. The Diovan Reduction of Proteinuria (DROP) study further examined the efficacy of valsartan in reducing UAE in 391 hypertensive patients (BP=150/88 mmHg) with type 2 diabetes, albuminuria (mean=102 µg/min; 20–700 µg/min) and preserved renal function (mean serum creatinine = 80 µmol/l). Patients were randomised to one of 3 doses of valsartan (160, 320 and 640 mg/OD) and treated for 30 weeks. The purpose of the study was to determine the optimal dose of valsartan for reducing UAE in hypertensive patients with type 2 diabetes. At 30 weeks, the percentage change in UAE was significantly reduced by 36% from baseline with valsartan 160 mg (95%CI: 22 to 47%), and by 44% with valsartan 320 mg (95%CI: 31 to 54%). It was concluded that 160-320 mg of valsartan produced clinically relevant reductions in UAE in hypertensive patients with type 2 diabetes.

Other: dual blockade of the renin-angiotensin-aldosterone system (RAAS)

In The reported study of two large randomised, controlled trials (ONTARGET (ONgoing Telmisartan Alone and in combination with Ramipril Global Endpoint Trial) and VA NEPHRON-D (The Veterans Affairs Nephropathy in Diabetes)) have examined the use of the combination of an ACE-inhibitor with an angiotensin II receptor blocker.

The reported ONTARGET was a study conducted in patients with a history of cardiovascular or cerebrovascular disease, or type 2 diabetes mellitus accompanied by evidence of end-organ damage. VA NEPHRON-D was a study in patients with type 2 diabetes mellitus and diabetic nephropathy.

These reported studies have shown no significant beneficial effect on renal and/or cardiovascular outcomes and mortality, while an increased risk of hyperkalaemia, acute kidney injury and/or hypotension as compared to monotherapy was observed. Given their similar pharmacodynamic properties, these results are also relevant for other ACE inhibitors and angiotensin II receptor blockers.

ACE inhibitors and angiotensin II receptor blockers should therefore not be used concomitantly in patients with diabetic nephropathy.

ALTITUDE (Aliskiren Trial in Type 2 Diabetes Using Cardiovascular and Renal Disease Endpoints) was a study designed to test the benefit of adding aliskiren to a standard therapy of an ACE inhibitor or an angiotensin II receptor blocker in patients with type 2 diabetes mellitus and chronic kidney disease, cardiovascular disease, or both. The study was terminated early because of an increased risk of adverse outcomes. Cardiovascular death and stroke were both numerically more frequent in the aliskiren group than in the placebo group and adverse events and serious adverse events of interest (hyperkalaemia, hypotension and renal dysfunction) were more frequently reported in the aliskiren group than in the placebo group.

Hydrochlorothiazide

The site of action of thiazide diuretics is primarily in the renal distal convoluted tubule. It has been shown that there is a high-affinity receptor in the renal cortex as the primary binding site for the thiazide diuretic action and inhibition of NaCl transport in the distal convoluted tubule. The mode of action of thiazides is through inhibition of the Na+Cl- symporter perhaps by competing for the Cl- site, thereby affecting electrolyte reabsorption mechanisms: directly increasing sodium and chloride excretion to an approximately equal extent, and indirectly by this diuretic action reducing plasma volume, with consequent increases in plasma renin activity, aldosterone secretion and urinary potassium loss, and a decrease in serum potassium. The renin-aldosterone link is mediated by angiotensin II, so with co-administration of valsartan the reduction in serum potassium is less pronounced as observed under monotherapy with hydrochlorothiazide.

Non-melanoma skin cancer:

Based on available data from epidemiological studies, cumulative dose-dependent association between hydrochlorothiazide and NMSC has been observed. One reported study included a population comprised of 71,533 cases of BCC and of 8,629 cases of SCC matched to 1,430,833 and 172,462 population controls, respectively. High hydrochlorothiazide use (≥50,000 mg cumulative) was associated with an adjusted Odds Ratio (OR) of 1.29 (95% CI: 1.23-1.35) for BCC and 3.98 (95% CI: 3.68-4.31) for SCC. A clear cumulative dose response relationship was observed for both BCC and SCC. Another study showed a possible association between lip cancer (SCC) and exposure to hydrochlorothiazide: 633 cases of lip-cancer were matched with 63,067 population controls, using a risk-set sampling strategy. A cumulative dose-response relationship was demonstrated with an adjusted OR 2.1 (95% CI: 1.7-2.6) increasing to OR 3.9 (3.0-4.9) for high use (~25,000 mg) and OR 7.7 (5.7-10.5) for the highest cumulative dose (~100,000 mg).

5.3 Pharmacokinetic properties

Valsartan/hydrochlorothiazide

The systemic availability of hydrochlorothiazide is reduced by about 30% when co-administered with valsartan. The kinetics of valsartan are not markedly affected by the co-administration of hydrochlorothiazide. This observed interaction has no impact on the combined use of valsartan and hydrochlorothiazide, since controlled clinical trials have shown a clear anti-hypertensive effect, greater than that obtained with either active substance given alone, or placebo.

Valsartan

Absorption:

Following oral administration of valsartan alone, peak plasma concentrations of valsartan are reached in 2–4 hours. Mean absolute bioavailability is 23%. Food decreases exposure (as measured by AUC) to valsartan by about 40% and peak plasma concentration (Cmax) by about 50%, although from about 8 h post dosing plasma valsartan concentrations are similar for the fed and fasted groups. This reduction in AUC is not, however, accompanied by a clinically significant reduction in the therapeutic effect, and valsartan can therefore be given either with or without food.

Distribution:

The steady-state volume of distribution of valsartan after intravenous administration is about 17 litres, indicating that valsartan does not distribute into tissues extensively. Valsartan is highly bound to serum proteins (94 – 97%), mainly serum albumin.

Biotransformation:

Valsartan is not biotransformed to a high extent as only about 20% of dose is recovered as metabolites. A hydroxy metabolite has been identified in plasma at low concentrations (less than 10% of the valsartan AUC). This metabolite is pharmacologically inactive.

Elimination:

Valsartan shows multiexponential decay kinetics ($t_{½\alpha}$ <1 h and $t_{½ß}$ about 9 h). Valsartan is primarily eliminated in faeces (about 83% of dose) and urine (about 13% of dose), mainly as unchanged drug. Following intravenous administration, plasma clearance of valsartan is about 2 l/h and its renal clearance is 0.62 l/h (about 30% of total clearance). The half-life of valsartan is 6 hours.

Hydrochlorothiazide

Absorption

The absorption of hydrochlorothiazide, after an oral dose, is rapid (tmax about 2 h). The increase in mean AUC is linear and dose proportional in the therapeutic range.
The effect of food on hydrochlorothiazide absorption, if any, has little clinical significance. Absolute bioavailability of hydrochlorothiazide is 70% after oral administration.

Distribution

The apparent volume of distribution is 4–8 l/kg.
Circulating hydrochlorothiazide is bound to serum proteins (40–70%), mainly serum albumin. Hydrochlorothiazide also accumulates in erythrocytes at approximately 3 times the level in plasma.

Elimination

Hydrochlorothiazide is eliminated predominantly as unchanged drug. Hydrochlorothiazide is eliminated from plasma with a half-life averaging 6 to 15 hours in the terminal elimination phase. There is no change in the kinetics of hydrochlorothiazide on repeated dosing, and accumulation is minimal when dosed once daily. There is more than 95% of the absorbed dose being excreted as unchanged compound in the urine. The renal clearance is composed of passive filtration and active secretion into the renal tubule.

Special populations

Older people

A somewhat higher systemic exposure to valsartan was observed in some elderly subjects than in young subjects; however, this has not been shown to have any clinical significance.
Limited data suggest that the systemic clearance of hydrochlorothiazide is reduced in both healthy and hypertensive elderly subjects compared to young healthy volunteers.

Renal impairment

At the recommended dose of Valzaar H no dose adjustment is required for patients with a Glomerular Filtration Rate (GFR) of 30–70 ml/min.
In patients with severe renal impairment (GFR <30 ml/min) and patients undergoing dialysis no data are available for Valzaar H. Valsartan is highly bound to plasma protein and is not to be removed by dialysis, whereas clearance of hydrochlorothiazide will be achieved by dialysis. In the presence of renal impairment, mean peak plasma levels and AUC values of hydrochlorothiazide are increased and the urinary excretion rate is reduced. In patients with mild to moderate renal impairment, a 3-fold increase in hydrochlorothiazide AUC has been observed. In patients with severe renal impairment an 8-fold increase in AUC has been observed. Hydrochlorothiazide is contraindicated in patients with severe renal impairment.

Hepatic impairment

In a pharmacokinetics trial in patients with mild (n=6) to moderate (n=5) hepatic dysfunction, exposure to valsartan was increased approximately 2-fold compared with healthy volunteers. There is no data available on the use of valsartan in patients with severe hepatic dysfunction. Hepatic disease does not significantly affect the pharmacokinetics of hydrochlorothiazide.

6. Nonclinical properties

6.1 Animal Toxicology or Pharmacology

The potential toxicity of the valsartan - hydrochlorothiazide combination after oral administration was investigated in rats and marmosets in studies lasting up to six months. No findings emerged that would exclude the use of therapeutic doses in man.

The changes produced by the combination in the chronic toxicity studies are most likely to have been caused by the valsartan component. The toxicological target organ was the kidney, the reaction being more marked in the marmoset than the rat. The combination led to kidney damage (nephropathy with tubular basophilia, rises in plasma urea, plasma creatinine and serum potassium, increases in urine volume and urinary electrolytes from 30 mg/kg/day valsartan + 9 mg/kg/day hydrochlorothiazide in rats and 10 + 3 mg/kg/d in marmosets), probably by way of altered renal haemodynamics. These doses in rat, respectively, represent 0.9 and 3.5–times the maximum recommended human dose (MRHD) of valsartan and hydrochlorothiazide on a mg/m2 basis. These doses in marmoset, respectively, represent 0.3 and 1.2–times the maximum recommended human dose (MRHD) of valsartan and hydrochlorothiazide on a mg/m2 basis. (Calculations assume an oral dose of 320 mg/day valsartan in combination with 25 mg/day hydrochlorothiazide and a 60-kg patient.)

High doses of the valsartan - hydrochlorothiazide combination caused falls in red blood cell indices (red cell count, haemoglobin, haematocrit, from 100 + 31 mg/kg/d in rats and 30 + 9 mg/kg/d in marmosets). These doses in rat, respectively, represent 3.0 and 12 times the maximum recommended human dose (MRHD) of valsartan and hydrochlorothiazide on a mg/m2 basis. These doses in marmoset, respectively, represent 0.9 and 3.5 times the maximum recommended human dose (MRHD) of valsartan and hydrochlorothiazide on a mg/m2 basis. (Calculations assume an oral dose of 320 mg/day valsartan in combination with 25 mg/day hydrochlorothiazide and a 60-kg patient).

In marmosets, damage was observed in the gastric mucosa (from 30 + 9 mg/kg/d). The combination also led in the kidney to hyperplasia of the afferent aterioles (at 600 + 188 mg/kg/d in rats and from 30 + 9 mg/kg/d in marmosets). These doses in marmoset, respectively,

represent 0.9 and 3.5 times the maximum recommended human dose (MRHD) of valsartan and hydrochlorothiazide on a mg/m2 basis. These doses in rat, respectively, represent 18 and 73 times the maximum recommended human dose (MRHD) of valsartan and hydrochlorothiazide on a mg/m2 basis. (Calculations assume an oral dose of 320 mg/day valsartan in combination with 25 mg/day hydrochlorothiazide and a 60-kg patient).

The above mentioned effects appear to be due to the pharmacological effects of high valsartan doses (blockade of angiotensin II-induced inhibition of renin release, with stimulation of the renin-producing cells) and also occur with ACE inhibitors. These findings appear to have no relevance to the use of therapeutic doses of valsartan in humans.

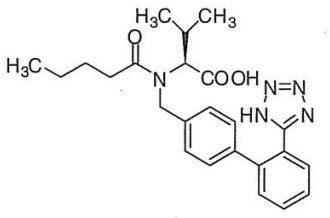
The valsartan - hydrochlorothiazide combination was not tested for mutagenicity, chromosomal breakage or carcinogenicity, since there is no evidence of interaction between the two substances. However, these tests were performed separately with valsartan and hydrochlorothiazide, and produced no evidence of mutagenicity, chromosomal breakage or carcinogenicity.

In rats, maternally toxic doses of valsartan (600 mg/kg/day) during the last days of gestation and lactation led to lower survival, lower weight gain and delayed development (pinna detachment and ear-canal opening) in the offspring. These doses in rats (600 mg/kg/day) are approximately 18 times the maximum recommended human dose on a mg/m2 basis (calculations assume an oral dose of 320 mg/day and a 60-kg patient). Similar findings were seen with valsartan/hydrochlorothiazide in rats and rabbits. In embryo-fetal development (Segment II) studies with valsartan/hydrochlorothiazide in rat and rabbit, there was no evidence of teratogenicity; however, fetotoxicity associated with maternal toxicity was observed.

7. Description

Valsartan:

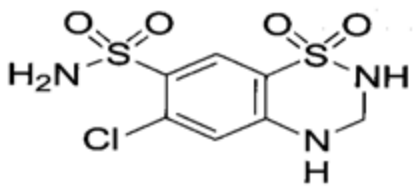
Valsartan is N-pentanonyl- N-[2'-(1H-tetrazol-5-yl)biphenyl-4-ylmethyl]-L-valine. having molecular formula of $C_{24}H_{29}N_5O_3$ molecular weight is 435.5 the chemical structure is:



Valsartan is a white to almost white powder.

Hydrochlorothiazide:

Hydrochlorothiazide is 6- chloro-3,4-dihydro-2H-1,2,4-benzohiadiazine-7-sulphonamide 1,1-dioxide.Having molecular formula $C_7H_8ClN_3O_4S_2$ molecular weight is 297.7. The chemical structure is:



VALZAAR-H Tablets is Pink colored, round,biconvex,film coated tablets. The excipients are Microcrystalline cellulose, Sodium lauryl sulphate, Crosspovidone xl 10, Colloidal silicon dioxide, Magnesium stearate, Crosspovidone xl-10, Colloidal silicon dioxide, Magnesium stearate, Lake of ponceau, Isopropyl alcohol, Propylene glycol.

8. Pharmaceutical particulars

8.1 Incompatibilities

None stated

8.1 Shelf-life

Do not use later than the date of expiry.

8.2 Packaging information

Available in strip of 10 Tablets.

8.3 Storage and handing instructions

Keep out of reach of children.

9. Patient counselling information

VALZAAR H

Valsartan and Hydrochlorothiazide Tablets I.P.

Read all of this leaflet carefully before you start taking this medicine because it contains important information for you.

- Keep this leaflet. You may need to read it again.
- Keep all medicines out of reach of children
- If you have any further questions, ask your doctor or pharmacist.
- **This medicine has been prescribed for you only.** Do not pass it on to others. It may harm them, even if their signs of illness are the same as yours.
- If you get any side effects talk to your doctor or pharmacist. This includes any possible side effects not listed in this leaflet.

What is in this leaflet?

9.5.How to store VALZAAR H

9.6.Contents of the pack and other information

9.1 What VALZAAR H is and what it is used for

VALZAAR H film-coated tablets contain two active substances called valsartan and hydrochlorothiazide. Both of these substances help to control high blood pressure (hypertension).

- Valsartan belongs to a class of medicines known as "angiotensin II receptor antagonists", which help to control high blood pressure. Angiotensin II is a substance in the body that causes vessels to tighten, thus causing your blood pressure to increase. Valsartan works by blocking the effect of angiotensin II. As a result, blood vessels relax and blood pressure is lowered.
- Hydrochlorothiazide belongs to a group of medicines called thiazide diuretics (also known as "water tablets"). Hydrochlorothiazide increases urine output, which also lowers blood pressure.

VALZAAR H used to treat high blood pressure which is not adequately controlled by a single substance alone.

High blood pressure increases the workload of the heart and arteries. If not treated, it can damage the blood vessels of the brain, heart, and kidneys, and may result in a stroke, heart failure or kidney failure. High blood pressure increases the risk of heart attacks. Lowering your blood pressure to normal reduces the risk of developing these disorders.

9.2 What you need to know before you take VALZAAR H

Do not take VALZAAR H

- VALZAAR H if you are allergic (hypersensitive) to valsartan, hydrochlorothiazide, sulphonamide derivatives (substances chemically related to hydrochlorothiazide) or to any of the other ingredients of this medicine.
- If you are more than 3 months pregnant (it is also better to avoid VALZAAR H in early pregnancy – see pregnancy section).
- If you have severe liver disease, destruction of the small bile ducts within the liver (biliary cirrhosis) leading to the build-up of bile in the liver (cholestasis).
- If you have severe kidney disease.
- If you are unable to produce urine (anuria).
- If you are treated with an artificial kidney.
- If the level of potassium or sodium in your blood is lower than normal, or if the level of calcium in your blood is higher than normal despite treatment.
- If you have gout.
- if you have diabetes or impaired kidney function and you are treated with a blood pressure.

If any of the above apply to you, tell your doctor and do not take VALZAAR H.

Warnings and precautions

- Talk to your doctor before taking VALZAAR H
- if you are taking potassium-sparing medicines, potassium supplements, salt substitutes containing potassium or other medicines that increase the amount of potassium in your

blood such as heparin. Your doctor may need to check the amount of potassium in your blood regularly.

- if you have low levels of potassium in your blood.
- if you have diarrhoea or severe vomiting.
- if you are taking high doses of water tablets (diuretics).
- if you have severe heart disease.
- if you are suffering from heart failure or have experienced a heart attack. Follow your doctor's instruction for the starting dose carefully. Your doctor may also check your kidney function.
- if you suffer from a narrowing of the kidney artery.
- if you have recently received a new kidney.
- if you suffer from hyperaldosteronism. This is a disease in which your adrenal glands make too much of the hormone aldosterone. If this applies to you, the use of VALZAAR H is not recommended.
- if you have liver or kidney disease.
- if you have ever experienced swelling of the tongue and face caused by an allergic reaction called angioedema when taking another drug (including ACE inhibitors), tell your doctor.If these symptoms occur when you are taking Valsartan/Hydrochlorothiazide, stop taking Valsartan/Hydrochlorothiazide immediately and never take it again. See also, "Possible side effects".
- if you have fever, rash and joint pain, which may be signs of systemic lupus erythematosus (SLE, a so-called autoimmune disease).
- if you have diabetes, gout, high levels of cholesterol or triglycerides in your blood.
- if you have had allergic reactions with the use of other blood pressure-lowering agents of this class (angiotensin II receptor antagonists) or if you have allergy or asthma.
- if you experience a decrease in vision or eye pain. These could be symptoms of fluid accumulation in the vascular layer of the eye (choroidal effusion) or an increase of pressure in your eye and can happen within hours to weeks of taking Valsartan/Hydrochlorothiazide. This can lead to permanent vision loss, if not treated. If you earlier have had a penicillin or sulphonamide allergy you can be at higher risk of developing this.
- if you are taking any of the following medicines used to treat high blood pressure:
    - An ACE inhibitors (for example enalapril, lisinopril, Ramipril), in particular if you have diabetes-related kidney problems.
    - Aliskiren
- if you have had skin cancer or if you develop an unexpected skin lesion during the treatment. Treatment with hydrochlorothiazide, particularly long term use with high doses, may increase the risk of some types of skin and lip cancer (non-melanoma skin cancer). Protect your skin from sun exposure and UV rays while taking Valsartan/Hydrochlorothiazide.

Other medicines and VALZAAR H

Tell your doctor or pharmacist if you are taking or have recently taken or might take any other medicines.

The effect of the treatment can be influenced if Co-Diovan is taken together with certain other medicines. It may be necessary to change the dose, to take other precautions, or in some cases to stop taking one of the medicines. This especially applies to the following medicines:

- Lithium, a medicine used to treat some types of psychiatric diseases.
- Medicines or substances that may increase the amount of potassium in your blood. These include potassium supplements or salt substitutes containing potassium, potassium-sparing medicines and heparin.
- Medicines that may reduce the amount of potassium in your blood, such as diuretics (water tablets), corticosteroids, laxatives, carbenoxolone, amphotericin or penicillin G.
- some antibiotics (rifamycin group), a drug used to protect against transplant rejection
- (Ciclosporin) or an antiretroviral drug used to treat HIV/AIDS infection (ritonavir). These drugs may increase the effect of Valzaar H.
- Medicines that may induce "torsades de pointes" (irregular heart beat), such as antiarrhythmics (medicines used to treat heart problems) and some antipsychotics.
- Medicines that may reduce the amount of sodium in your blood, such as antidepressants,Antipsychotics, antiepileptics.
- Medicines for the treatment of gout, such as allopurinol, probenecid, sulfinpyrazone
- Therapeutic vitamin D and calcium supplements.
- Medicines for the treatment of diabetes (oral agents such as metformin or insulins).
- Other medicines to lower your blood pressure including methyldopa, ACE inhibitors (such as enalapril, lisinopril, etc.) or aliskiren (see also information under the headings "Do not take Valzaar H" and "Warnings and precautions").
- Medicines to increase blood pressure, such as noradrenaline or adrenaline.
- Digoxin or other digitalis glycosides (medicines used to treat heart problems).
- Medicines that may increase blood sugar levels, such as diazoxide or beta blockers.
- Cytotoxic medicines (used to treat cancer), such as methotrexate or cyclophosphamide.
- Pain killers such as non-steroidal anti-inflammatory agents (NSAIDs), including selective cyclooxygenase-2 inhibitors (Cox-2 inhibitors) and acetylsalicylic acid > 3 g.
- Muscle relaxing medicines, such as tubocurarine.
- Anti-cholinergic medicines (medicines used to treat a variety of disorders such as gastrointestinal cramps, urinary bladder spasm, asthma, motion sickness, muscular spasms, Parkinson's disease and as an aid to anaesthesia).
- Amantadine (medicine used to treat Parkinson's disease and also used to treat or prevent certain illnesses caused by viruses).
- Cholestyramine and colestipol (medicines used mainly to treat high levels of lipids in the blood).
- Ciclosporin, a medicine used for organ transplant to avoid organ rejection.
- Alcohol, sleeping pills and anaesthetics (medicines with sleeping or painkilling effect used for example during surgery).
- Iodine contrast media (agents used for imaging examinations).

Driving and using machines

Before you drive a vehicle, use tools or operate machines or carry out other activities that require concentration, make sure you know how Valzaar H affects you. Like many other medicines used to treat high blood pressure, Valzaar H may occasionally cause dizziness and affect the ability to concentrate.

Taking VALZAAR H with food, drink and alcohol

Avoid taking alcohol until you have talked to your doctor. Alcohol may make your blood pressure fall more and/or increase the risk of you becoming dizzy or feeling faint.

Pregnancy and breast-feeding

- **You must tell your doctor if you think that you are (or might become) pregnant**

Your doctor will normally advise you to stop taking Valzaar H before you become pregnant or as soon as you know you are pregnant, and will advise you to take another medicine instead of Valzaar H. Valzaar H is not recommended in early pregnancy, and must not be taken when more than 3 months pregnant, as it may cause serious harm to your baby if it is used after the third month of pregnancy.

- **Tell your doctor if you are breast-feeding or about to start breast-feeding**

VALZAAR H is not recommended for mothers who are breast-feeding, and your doctor may choose another treatment for you if you wish to breast-feed, especially if your baby is newborn, or was born prematurely.

9.3 How to take VALZAAR H

Always take this medicine exactly as your doctor has told you. This will help you to get the best results and lower the risk of side effects. Check with your doctor or pharmacist if you are not sure.

People with high blood pressure often do not notice any signs of this problem. Many may feel quite normal. This makes it all the more important for you to keep your appointments with your doctor even if you are feeling well.

Your doctor will tell you exactly how many tablets of VALZAAR H to take. Depending on how you respond to the treatment, your doctor may suggest a higher or lower dose.

If you take more Valzaar H than you should

If you experience severe dizziness and/or fainting, lie down and contact your doctor immediately.

If you have accidentally taken too many tablets, contact your doctor, pharmacist or hospital.

If you forget to take Valzaar H

If you forget to take a dose, take it as soon as you remember. However, if it is almost time for your next dose, skip the dose you missed.

Do not take a double dose to make up for a forgotten dose.

If you stop taking Valzaar H

Stopping your treatment with Valzaar H may cause your high blood pressure to get worse. Do not stop taking your medicine unless your doctor tells you to.

If you have any further questions on the use of this medicine, ask your doctor or pharmacist.

9.4 Possible side effects

Like all medicines, this medicine can cause side effects, although not everybody gets them.

Some side effects can be serious and need immediate medical attention:

- You should see your doctor immediately if you experience symptoms of angioedema, such as:
  - swollen face, tongue or pharynx
  - difficulty in swallowing
  - hives and difficulties in breathing
- Severe skin disease that causes rash, red skin, blistering of the lips, eyes or mouth, skin peeling, fever (toxic epidermal necrolysis)
- Decrease in vision or pain in your eyes due to high pressure (possible signs of acute angleclosure glaucoma)
- Fever, sore throat, more frequent infections (agranulocytosis)

These side effects are very rare or of frequency not known.

If you get any of these symptoms, stop taking Co-Diovan and contact your doctor straight away (see also section "Warnings and precautions").

Side effects include:

Uncommon (may affect up to 1 in 100 people):

- Cough
- low blood pressure
- light-headedness
- dehydration (with symptoms of thirst, dry mouth and tongue, infrequent urination, dark colored urine, dry skin)
- muscle pain
- tiredness
- tingling or numbness
- blurred vision
- noises (e.g. hissing, buzzing) in ears

Very rare *(may affect up to 1 in 10,000 people):*

- dizziness
- diarrhoea
- joint pain

Not known (frequency cannot be estimated from the available data):

- breathing difficulty
- severely decreased urine output
- low level of sodium in the blood (which can trigger tiredness, confusion, muscle twitching and /or convulsions in severe cases)
- low level of potassium in the blood (sometimes with muscle weakness, muscle spasms, abnormal heart rhythm)
- low level of white cells in the blood (with symptoms such as fever, skin infections, sore throat or mouth ulcers due to infections, weakness)
- the level of bilirubin increased in blood (which can, in severe cases, trigger yellow skin and eyes)

- the level of blood urea nitrogen and creatinine increased in blood (which can indicate abnormal kidney function)
- the level of uric acid in blood increased (which can, in severe cases, trigger gout)
- syncope (fainting)

The following side effects have been reported with products containing valsartan or hydrochlorothiazide alone:

Valsartan

Uncommon *(may affect up to 1 in 100 people):*

- spinning sensation
- abdominal pain

Not known *(frequency cannot be estimated from the available data):*

- blistering skin (sign of dermatitis bullous)
- skin rash with or without itching together with some of the following signs or symptoms: fever, joint pain, muscle pain, swollen lymph nodes and/or flu-like symptoms
- rash, purplished-red spots, fever, itching (symptoms of inflammation of blood vessels)
- low level of blood platelets (sometimes with unusual bleeding or bruising)
- high level of potassium in the blood (sometimes with muscle spasms, abnormal heart rhythm)
- allergic reactions (with symptoms such as rash, itching, hives, difficulty breathing or swallowing, dizziness)
- swelling mainly of the face and throat; rash; itching
- elevation of liver function values
- the level of haemoglobin decreased and the percentage of red cells decreased in the blood (which both can, in severe cases, trigger an anaemia).
- kidney failure
- low level of sodium in the blood (which can trigger tiredness, confusion, muscle twitching and/or convulsions in severe cases)

Hydrochlorothiazide

Very common *(may affect more than 1 in 10 people):*

- low level of potassium in the blood
- increase of lipids in the blood

Common *(may affect up to 1 in 10 people):*

- low level of sodium in the blood
- low level of magnesium in the blood
- high level of uric acid in the blood
- itchy rash and other types of rash
- reduced appetite
- mild nausea and vomiting
- dizziness, fainting on standing up
- inability to achieve or maintain erection

Rare *(may affect up to 1 in 1,000 people):*

- swelling and blistering of the skin (due to increased sensitivity to sun)
- high level of calcium in the blood
- high level of sugar in the blood
- sugar in the urine
- worsening of diabetic metabolic state
- constipation, diarrhoea, discomfort of the stomach or bowels, liver disorders which can occur
- together with yellow skin and eyes
- irregular heart beat
- headache
- sleep disturbances
- sad mood (depression)
- low level of blood platelets (sometimes with bleeding or bruising underneath the skin)
- dizziness
- tingling or numbness
- vision disorder

Very rare *(may affect up to 1 in 10,000 people):*

- inflammation of blood vessels with symptoms such as rash, purplish-red spots, fever (vasculitis)
- rash, itching, hives, difficulty breathing or swallowing, dizziness (hypersensitivity reactions)
- facial rash, joint pain, muscle disorder, fever (lupus erythematosus)
- severe upper stomach pain (pancreatitis)
- difficulty breathing with fever, coughing, wheezing, breathlessness (respiratory distress including
- pneumonitis and pulmonary oedema)
- pale skin, tiredness, breathlessness, dark urine (haemolytic anaemia)
- fever, sore throat or mouth ulcers due to infections (leucopenia)
- confusion, tiredness, muscle twitching and spasm, rapid breathing (hypochloraemic alkalosis)

Not known *(frequency cannot be estimated from the available data):*

- weakness, bruising and frequent infections (aplastic anemia)
- severely decreased urine output (possible signs of renal disorder or renal failure)
- rash, red skin, blistering of the lips, eyes or mouth, skin peeling, fever (possible signs of erythema multiforme)
- muscle spasm
- fever (pyrexia)
- weakness (asthenia)
- skin and lip cancer (non-melanoma skin cancer)

Reporting of side effects

If you get any side effects, talk to your doctor or pharmacist. This includes any possible side effects not listed in this leaflet. You can also report side effects directly via any point of contact of Torrent Pharma available at:

http://www.torrentpharma.com/index.php/site/info/adverse_event_reporting. By reporting side effects, you can help provide more information on the safety of this medicine.

9.5 How to store VALZAAR H

Store in a cool (below 25°C) and dry place. Protect from light.

9.6 Contents of the pack and other information

What **VALZAAR H** contains

VALZAAR-H 80

Each film coated tablet contains:

Valsartan I.P…….80 mg

Hydrochlorothiazide I.P. …..12.5 mg

Colours: Lake of Ponceau 4R and Titanium dioxide I.P.

VALZAAR-H 160

Each film coated tablet contains:

Valsartan I.P…….160 mg

Hydrochlorothiazide I.P. …..12.5 mg

The excipients are Microcrystalline cellulose, Sodium lauryl sulphate, Crosspovidone xl 10, Colloidal silicon dioxide, Magnesium stearate, Crosspovidone xl-10, Colloidal silicon dioxide, Magnesium stearate, Lake of ponceau, Isopropyl alcohol, Propylene glycol.

10. Details of manufacturer

VALZAAR-H 80

Manufactured by:

TORRENT PHARMACEUTICALS LTD.

32 No., Middle Camp, NH-10,

East District, Gangtok, Sikkim-737 135.

OR

Manufactured by:

Windlas Biotech Pvt. Limited (Plant-2)

Khasra No. 141-143 & 145, Mohabewala Industrial Area,

Dehradun-248 110, Uttarakhand.

VALZAAR-H 160

TORRENT PHARMACEUTICALS LTD.

Vill. Bhud & Makhnu Majra,

The. Baddi-173 205, Dist. Solan (H.P.), INDIA.

11. Details of permission or licence number with date

VALZAAR-H 80

TORRENT PHARMACEUTICALS LTD.

Mfg Lic No. M/563/2010 issued on 23.12.2016

OR

Helios Pharmaceuticals

Mfg Lic No. 34/UA/2013 issued on 25.09.2020

VALZAAR-H 160

Ravenbhel Biotech

Mfg lice: MNB/05/183 Issued on 09.08.2005

12. Date of revision

Mar-2021

MARKETED BY

TORRENT PHARMACEUTICALS LTD.

IN/VALZAAR H 12.5,80,160mg /MAR-21/05/PI